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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/646,983
Filing Date: August 21, 2003
Appellant(s): HANNEL ET AL.

John E. Gunther
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed July 14, 2011 appealing from the Office action mailed February 17, 2011.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

- Claims 1-4, 6-21, 23-35, and 37-45 are rejected and pending in the application.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

Gerrevink (US 2003/0012141 A1) hereinafter "Gerrevink", and Beanland (US 6,028,847), hereinafter, "Beanland".

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

- I. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

II. Claims 1-4, 6-21, 23-26, 35, and 37-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Gerrevink et al. (US 2003/0012141 A1).

With respect to claim 1, Gerrevink discloses:

- coupling a device to the communications network, the device comprising a chassis and one or more adapter cards, the adapter cards comprising hardware and software ([0031] and [0035], *traffic stream generator*)
- the device setting up for simulation of a realistic mix of network traffic on the communications network ([0031] and [0035], *simulating a traffic mix*)
- the device simulating the realistic mix of network traffic on the communications network ([0031] and [0035], *simulating a traffic mix*)
- the device setting up for engaging in stateful TCP connections with the system under test ([0037] and [0067], *traffic stream generator for simulating realistic network traffic*)
- the device engaging in stateful TCP connections with the system under test concurrently with the step of simulating the realistic mix of network traffic on the communications network ([0037] and [0067], *simulating realistic network traffic*)
- the device measuring performance of the system under test for the stateful TCP connections under load of the simulated network traffic from the device ([0037], [0067], and [0075], *making real-time measurements*)

With respect to independent claims 15 and 21 the limitations of these claims are similar to the limitations of claim 1. Therefore, claims 15 and 21 are rejected for the same reasons as claim 1 above. Please see rejection above.

With respect to claim 35, Gerrevink discloses simulating real-world network traffic on the communications network generating stateful TCP connections across the communications network with the system under test measuring performance metrics of the system under test in supporting the stateful TCP connections in the presence of the simulated real-world network traffic ([0037], [0067], and [0075], *making real-time measurements*).

changing quantity and quality of the simulated real-world network traffic ([0037], [0067], and [0075], *performing simulation will inherently modify the network traffic by increasing or decreasing traffic load in network*)

wherein the steps of simulating, generating and measuring are performed concurrently ([0037], [0067], and [0075], *simulating realistic network traffic and generating different traffic classes to make real-time measurements*)

With respect to claim 2, Gerrevink discloses the system under test comprises an application, the application operative on a server, the application for providing user-level interaction with plural client computers on the communications network the providing step comprises providing the server and the application operative thereon ([0031] and [0035])

With respect to claim 3, Gerrevink discloses the system under test comprises a server load balancer ([0077])

With respect to claim 4, Gerrevink discloses the system under test comprises a stateful network communications device (Figure 1)

With respect to claim 6, Gerrevink discloses the simulated network traffic is generated by a stateless packet processor (Figure 1)

With respect to claims 7 and 38, Gerrevink discloses the system under test comprises a stateful application which uses underlying services of TCP ([0031])

With respect to claims 8 and 39, Gerrevink discloses the system under test comprises an HTTP server ([0078])

With respect to claims 9 and 40, Gerrevink discloses the system under test comprises an FTP server ([0078])

With respect to claims 10 and 41, Gerrevink discloses modifying a behavior of the network traffic simulated by the device continuing to engage in stateful TCP connections with the system under test continuing to measure performance of the system under test for the stateful TCP connections ([0037], [0067], and [0075])

With respect to claim 17, Gerrevink discloses hardware and software for modifying a behavior of the simulated network traffic (Figure 3, **350**)

With respect to claims 11, 18, 24, and 42, Gerrevink discloses using performance metrics based on the stateful TCP connections to modify the behavior of the simulated network traffic to more closely simulate a realistic mix of network traffic ([0031])

With respect to claims 12, 19, 25, and 43, Gerrevink discloses the performance metrics are selected from the group consisting of retransmission rate, fragmentation, packet sizes, and drop/reset rates ([0018])

With respect to claims 13 and 44, Gerrevink discloses a user using a control program to change the behavior of the simulated network traffic via a system interface ([0031], [0067], and [0075])

With respect to claims 14 and 45, Gerrevink discloses the user managing multiple ports in a coordinated fashion ([0031], [0067], and [0075])

With respect to claim 16, Gerrevink discloses the adapter cards include a stateless packet processor for simulating the realistic mix of network traffic on the communications network (Figure 1)

With respect to claims 20 and 26, Gerrevink discloses hardware and software for changing a behavior of the simulated network traffic in response to user instructions (Figure 3, **350**)

With respect to claim 37, Gerrevink discloses the simulated network traffic is generated by a stateless packet processor (Figure 1)

Claim Rejections - 35 USC § 103

III. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

IV. Claims 27-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerrevink et al. (US 2003/0012141 A1), in view of Beanland (6,028,847).

With respect to independent claim 27, the limitations of this claim are similar to the limitations of claim 1. Therefore, claim 27 is rejected for the same reasons as claim 1 above. Please see rejection above.

In addition, Gerrevink does not explicitly disclose each interactive transaction includes receiving at least one packet from the system under test and sending at least one response packet in response to the received packet.

However, Beanland discloses each interactive transaction includes receiving at least one packet from the system under test and sending at least one response packet in response to the received packet (Col. 7, lines 56-67, *a handshaking protocol is used to establish a connection between the emulator and the equipment under test. The handshake protocol is well known in the art at the time of the invention to be used for*

transmission of a negotiation packet between devices which includes the connection parameters.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the teachings of Gerrevink with the teachings of Beanland to include a request-response relationship between the testing device and the system under test, *because* it will allow for connection integrity between the devices.

With respect to claim 28, Gerrevink discloses the simulated network traffic is generated by a stateless packet processor (Figure 1)

With respect to claim 29, Gerrevink discloses the system under test comprises a stateful application which uses underlying services of TCP ([0031])

With respect to claim 30, Gerrevink discloses the system under test comprises an HTTP server ([0078])

With respect to claim 31, Gerrevink discloses the system under test comprises an FTP server ([0078])

With respect to claim 32, Gerrevink discloses using performance metrics based on the stateful TCP connections to modify the behavior of the simulated network traffic to more closely simulate a realistic mix of network traffic ([0031])

With respect to claim 33, Gerrevink discloses the performance metrics are selected from the group consisting of retransmission rate, fragmentation, packet sizes, and drop/reset rates ([0018])

With respect to claim 34, Gerrevink discloses a user using a control program to change the behavior of the simulated network traffic via a system interface ([0031], [0067], and [0075])

(10) Response to Arguments

With respect to claims 1-4 and 6-20,

- the appellant states 'Gerrevink does not disclose engaging in stateful TCP connections with the system under test concurrently with simulating a realistic mix of network traffic'. The examiner respectfully disagrees with the appellant. The examiner directs the appellant to paragraphs [0031], [0035], [0037], and [0062] of the reference Gerrevink. In these sections, Gerrevink discloses a traffic stream generator which generates and releases TCP packets to a system under test. The traffic generator is used to simulate a realistic network traffic by the transmission of various packets to the device. The connection used in the test system is preferably a TCP socket connection. In particular, the data packets may be of TCP acknowledgements type. A TCP acknowledgement packet is well known in the art to acknowledge the receipt of a transmitted packet. The appellant argues that 'engaging in stateful TCP connections additionally requires receiving TCP packets from the equipment under test, determining and storing information on the state of the connection in a state memory, and generating a new TCP packets based on received TCP packets and the stored state information'. The examiner respectfully

notes that a search was performed to determine the validity of this feature, but have not found any evidence to support this requirement. The Examiner suggests the appellant to provide evidence to support these claims since this feature is not defined in the claim limitations or the specification. The appellant also states 'Gerrevink and Beanland do not disclose measuring performance of the system under test for the stateful TCP connections under load of the simulated network traffic from the device'. The examiner respectfully disagrees. In particular, Gerrevink discloses in paragraph [0078] the analysis of performance measurements when tests are performed. For example, one test may generate long bursts of traffic simultaneously with a constant background load in order to analyze performance measurements.

With respect to claims 21 and 23-26,

- the appellant states 'Gerrevink does not disclose a processor executing a TCP application for engaging in stateful TCP connections with the system under test concurrently with simulating a realistic mix of network traffic'. The examiner respectfully disagrees with the appellant. The examiner directs the appellant to paragraphs [0031], [0035], [0037], and [0062] of the reference Gerrevink. In these sections, Gerrevink discloses a traffic stream generator which generates and releases TCP packets to a system under test. The traffic generator is used to simulate a realistic network traffic by the transmission of various packets to the device. The

connection used in the test system is preferably a TCP socket connection. In particular, the data packets may be of TCP acknowledgements type. A TCP acknowledgement packet is well known in the art to acknowledge the receipt of a transmitted packet. The appellant also states 'Gerrevink and Beanland do not disclose means for measuring the performance of the system under test for the stateful TCP connections under load of the simulated network traffic'. The examiner respectfully disagrees. In particular, Gerrevink discloses in paragraph [0078] the analysis of performance measurements when tests are performed. For example, one test may generate long bursts of traffic simultaneously with a constant background load in order to analyze performance measurements.

With respect to claims 35 and 37-45,

- the appellant states 'Gerrevink does not disclose a generating stateful TCP connections across a communications network with a system under test'. The examiner respectfully disagrees with the appellant. The examiner directs the appellant to paragraphs [0031], [0035], [0037], and [0062] of the reference Gerrevink. In these sections, Gerrevink discloses a traffic stream generator which generates and releases TCP packets to a system under test. The traffic generator is used to simulate a realistic network traffic by the transmission of various packets to the device. The connection used in the test system is preferably a TCP socket connection. In particular, the data packets may be of TCP acknowledgements type. A

TCP acknowledgement packet is well known in the art to acknowledge the receipt of a transmitted packet. The appellant also states 'Gerrevink and Beanland do not disclose means for measuring the performance of the system under test for the stateful TCP connections under load of the simulated network traffic'. The examiner respectfully disagrees. In particular, Gerrevink discloses in paragraph [0078] the analysis of performance measurements when tests are performed. For example, one test may generate long bursts of traffic simultaneously with a constant background load in order to analyze performance measurements.

With respect to claims 27-34,

- the appellant states 'Gerrevink does not disclose second means for generating stateful TCP connections across a communications network with a system under test'. The examiner respectfully disagrees with the appellant. The examiner directs the appellant to paragraphs [0031], [0035], [0037], and [0062] of the reference Gerrevink. In these sections, Gerrevink discloses a traffic stream generator which generates and releases TCP packets to a system under test. The traffic generator is used to simulate a realistic network traffic by the transmission of various packets to the device. The connection used in the test system is preferably a TCP socket connection. In particular, the data packets may be of TCP acknowledgements type. A TCP acknowledgement packet is well known in the art to acknowledge the receipt of a transmitted packet.

The appellant also states 'Gerrevink and Beanland do not disclose third means for measuring the performance of the system under test in supporting the stateful TCP connections from the second means in the presence of the simulated traffic on the communication network from the first means'. The examiner respectfully disagrees. In particular, Gerrevink discloses in paragraph [0078] the analysis of performance measurements when tests are performed. For example, one test may generate long bursts of traffic simultaneously with a constant background load in order to analyze performance measurements. The appellant also states 'Gerrevink and Beanland do not disclose a controller coupled to the first means, the controller for changing quantity and quality of the network traffic simulated by the first means'. The examiner respectfully disagrees. In particular, Gerrevink discloses in paragraphs [0067], [0075], and [0043], modification of the network traffic by allowing the user to control the traffic routed to the device under test.

- The appellant also states 'Beanland does not disclose sending at least one response packet in response to the received packet'. The examiner respectfully disagrees. In the same filed of endeavor, Beanland discloses a traffic emulator that performs a handshake link with an equipment under test in Col. 7, lines 56-59. The claim limitation only requires that each interactive transaction include receipt of at least one packet from the system under test and send at least one response packet in response to

the received packet. A handshaking between the traffic emulator would constitute as an interactive transaction which includes receiving a packet by the equipment under test and acknowledgement of receipt by the equipment under test.

- Applicant's arguments as to what specifically constitutes "stateful TCP connections" are not found supported in the specification or claim limitations. For these reasons and reasons set forth above, the examiner's rejections are deemed proper.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Esther Benoit/

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